INDEX TO VOL. VIII (A).

AUTHORS' INDEX.

Angus, W. Rogie .. Raman spectra of terpenes, 529.

Ansidei, R. Manzoni .. *See* Bonino e Ansidei.

Ballaus, O. .. Studien zum Raman-Effekt, Mitteilung 94, Tetrolsaüre und Ester, 483.

Bär, R. .. The dispersion of the ultrasonic velocity in liquids, 289.

Bhagavantam, S. .. Interpretation of Raman Spectra in Crystals : Anhydrite and Gypsum, 345.

Bhagavantam, S., and Venkatarayudu, T. The normal modes and frequencies of the sulphur molecule, 101

Raman spectrum and specific heat of sulphur, 115.

The normal frequencies of phosphorus (P_4), 119.

Bonino, G. B., e Ansidei, R. Manzoni Sullo Spettro Raman di alcuni Idrocarburi Paraffinici, 405.

Born, Max .. Some remarks on reciprocity, 309.

Brillouin, Léon .. On thermal dependence of elasticity in solids, 251.

B. S. M. .. Prefatory Note to the Special Number, 249.

B. S. M. and C. S. V. .. Sir C. V. Raman's Fiftieth Birthday, 243.

Burkard, Otto .. Durchrechnung einiger ausgewählter Molekül-Modelle, 365.

Chowdhry, Nazir Ahmad, and Desai, R. D. Heterocyclic compounds. Part VII—Coumarins from resacetophenone and Cyclic-β-ketonic esters, 1 ; Part VIII—Coumarins from alkylcyclo-hexanone-2-carboxylates and *trans*-β-decalone-3-carboxylate, 12.

Chowla, I. .. A Theorem in the additive theory of numbers, 160.

Generalization of a theorem of Dickson, 223.

Chowla, S. .. A remark on $g(n)$, 237.

C. S. V. .. *See* B. S. M. and C. S. V.

Dass, Ione Nitravati Dharam, and Dutt, S. Colour in relation to Chemical constitution of the organic and inorganic salts of *Iso*nitroso-diphenyl-thio-barbituric acid and its higher homologues and analogues, 145.

Desai, R. D. .. *See* Chowdhry and Desai.

Desai, R. D., and Ekhlas, M.	Studies in the Friedel-Crafts reaction. Part IV—The action of acetyl chloride and acetic anhydride on resorcinol and its derivatives. An evidence for γ-substitution in the resorcinol nucleus, 194.
	Heterocyclic compounds. Part IX.—Coumarins from substituted resacetophenones and ethyl aceto-acetate, 567.
Dutt, S. ..	*See* Dass and Dutt.
	See Singh and Dutt.
Ekhlas, M. ..	*See* Desai and Ekhlas.
Ferreira, B. F., and Wheeler, T. S.	A study of the benzoin reaction. VI—The effect of temperature variation on the benzoin reaction, 61.
Freymann, Mme Marie, et René Freymann	Spectres Raman et spectres d'absorption infrarouge de compose's ou l'azote est tetracoordonné, 301.
Freymann, René ..	*See* Freymann et Freymann.
Gavankar, K. D. ..	*See* Hirwe and others.
Gloden, A. ..	*See* Moessner and Gloden.
Hibben, James H. ..	A Statistical analysis of trends in research on the Raman Effect, 294.
Hiedemann, E., und Osterhammel, K.	Untersuchung von Schall-amplituden-Feldern mittels einer Methode der Ischromaten, 275.
Hirwe, N. W., Rana, K. N., and Gavankar, K. D.	Derivatives of salicylic acid. Part XIII—Chlorosalicylic acids and their methyl ethers, 208.
Iyengar, K. S. K. ..	On linear transformations of bounded sequences—II, 20 ; III, 135.
Iyengar, K. Venkatachala	*See* Rao and Iyengar.
Jordan, P. ..	Über biologische Wirkungen Ultra-violetter Lichtquanten, 281.
Kahovec, L. ..	Studien Zum Raman-Effekt, Mitteilung 91, Asymmetriches Phthalyl chlorid, 330.
Kahovec, L., und Wagner, J.	Studien Zum Raman-Effekt, Mitteilung 90, Parasubstituiertes Acetophenon, 323.
Kastler, A. ..	The Raman Effect and multiple scattering of light, 476.
Kohlrausch, K. W. F., und Reitz, A. W.	Studien Zum Raman-Effekt, Mitteilung 89, Aethylenoxyd, 255.
Kohlrausch, K. W. F., und Sabathy, R.	Studien Zum Raman-Effekt, Mitteilung 93, Cyclobutan-1-2-dicarbonsaüren und Abkömmlinge, 436.

Kohlrausch, K. W. F., und Skrabal, R. — Studien Zum Raman-Effekt, Mitteilung 92, Das Raman Spektrum des dimeren Ketens, 424.

Krishnan, K. S., and Seshan, P. K. — Directional variations in the absorption and the fluorescence of the chrysene molecule, 487.

Krishnan, R. S. .. — The anomalous depolarisation of light scattering in optical glasses, 442.

Magat, Michel .. — *See* Moureu and others.

Majumdar, V. D., and Vajifdar, M. B. — Coefficient of viscosity of air, 171.

Mizushima, San-Ichiro, and Morino Yonezo — Raman spectra and molecular configurations of solid ethylene dihalides, 315.

Moessner, A., and Gloden, A. — Diophantische Probleme, 202.

Morino, Yonezo .. — *See* Mizushima and Morino.

Moureu, Henri, Magat, Michel, et Wetroff, Georges — Effet Raman et Structure des Composes AX^5 : Pentachlorure de phosphore et Homologues, 356.

Mueller, Hans .. — Light scattering in anisotropic media, 267.

Murti, G. V. L. N., and Seshadri, T. R. — Raman effect and chemical constitution. Influence of constitutive and other factors on the double bonds in organic compounds. Part I—Coumarin, 519.

Nath, N. S. Nagendra .. — Diffraction of light by ultrasonic waves, 499.

Nayar, P. G. N. .. — A chart of the Raman bands of water in crystals, 419.

Nedungadi, T. M. K. .. — Diffraction of X-rays in organic glasses, 65.

The scattering of light in sodium nitrate crystals, 397.

Nilakantan, P. .. — Magnetic anisotropy and pleochroism of biotite mica, 39.

Osterhammel, K. .. — *See* Hiedemann und Osterhammel.

Paulsen, O., und Reitz, A. W. — Oertliche Empfindlichkeits-unterschiede in der Schichte de Photographschen Platte, 504.

Pendl, E., Reitz, A. W., und Sabathy, R. — Studien Zum Raman-Effekt, Mitteilung 95, Stickstoffkörper XII (Nitrogruppe), 508.

Rana, K. N. .. — *See* Hirwe and others.

Rangaswami, S. .. — A fine adjustment device for use with the Micro-Dumas apparatus, 220.

Rangaswami, S., and Seshadri, T. R. — Nuclear methylation of resacetophenone. Preparation of 3-methylresacetophenone and its derivatives, 214.

Rao, A. Narasinga .. Studies in turbine geometry—II. On the sub-geometries of Lie which belong to the Mobius-Laguene Pencil, 179.

Rao, B. S. Madhava, and Iyengar, K. Venkatachala — On an inequality concerning lattice sums, 524.

Rao, K. Nagabhushana .. Diffraction of light by ultrasonic waves, 124.

Rau, M. A. Govinda .. Diffraction of light by superposed ultrasonic waves, 6.

Reitz, A. W. .. *See* Kohlrausch und Reitz.
See Pendl und others.
See Paulsen und Reitz.

Sabathy, R. .. *See* Kohlrausch und Sabathy.
See Pendl and others.

Saksena, Bishambar Dayal — Raman spectra of some organic bi-cyclic compounds. Naphthalene, decaline, tetralin, indene, *trans*-β-decalone, *trans*-β-decalol, 73.
Depolarisation of unmodified light-scattering in liquids, 460.

Seshadri, T. R. .. *See* Rangaswami and Seshadri.
.. *See* Murti and Seshadri.

Seshan, P. K. .. *See* Krishnan and Seshan.

Sibaiya, L. .. Scattering of Light in a Rochelle Salt Crystal, 393.

Singh, K. M. P., and Dutt, S. — Dyes derived from Chrysoquinone, 187.

Skrabal, R. .. *See* Kohlrausch und Skrabal.

Sukhatme, P. V. .. An application of the bi-Partitional function Hg (P, Q) in the enumeration of different samples from finite population, 8.

Sundaram, S. Minakshi .. On an infinite system of non-linear integral equations, 238.

Sutherland, G. B. B. M. .. The relation between the force constant, the inter-nuclear distance and the dissociation energy of a diatomic linkage, 341.

Thiruvenkatachar, V. R. .. Note on harmonic functions, 227.

Trenkler, F. .. Eigenschwingungen mechanischer Molekülmodelle IV, Der Viererring, 383.

Vaidyanathaswamy, R. .. Quasi-boolean algebras and many valued logics, 165.

Vajifdar, M. B. .. *See* Majumdar and Vajifdar.

Venkatarayudu, T. .. Normal frequency of diamond lattice, 349.
See Bhagavantam and Venkatarayudu.

Venkateswaran, C. S. .. Low frequency Raman lines in organic crystals, 448.

Vrkljan, V. S. .. Theoretische Bemerkungen zum R. S. Krishnan's Reziprozitätsgesetz der Kolloid-Optik, 353.

Wagner, J. .. *See* Kahovec und Wagner.

Wetroff, Georges .. *See* Moureu and others.

Wheeler, T. S. .. *See* Ferreira and Wheeler.

Yost, Don M. .. The Raman spectra of volatile fluorides. Applications of Raman spectra to Chemical problems, 333.

TITLE INDEX.

Absorption and fluorescence of the Chrysene molecule, Directional variations in (Krishnan and Seshan), 487.

Benzoin reaction, a study, VI (Ferriera and Wheeler), 61.
Bi-partitional function Hg (P, Q), an application, in the enumeration of different samples from finite population (Sukhatme), 8.

Chrysoquinone, dyes derived from (Singh and Dutt), 187.

Diamond lattice, Normal frequency of (Venkatarayudu), 349.
Diatomic linkage, The relation between the force constant, the internuclear distance, and the dissociation energy of (Sutherland), 341.
Dickson, theorem, generalization (Chowla), 223.
Diffraction of light by superposed ultrasonic waves (Rau), 6.
Diffraction of light by supersonic waves (Nath), 499.
Diffraction of light by ultrasonic waves (Rao), 124.
Diffraction of X-rays in organic glasses (Nedungadi), 65.
Diophantische Probleme (Moessner and Gloden), 202.
Durchrechnung einiger ausgewählter Molekül-Modelle (Burkard), 365.

Effet Raman et Structure des Composes AX^5: Pentachlorure de phosphore et homologues (Moureu, Magat et Wetroff), 356.
Eigenschwingungen mechanischer Molekül-modelle. IV. Der Viererring (Trenkler), 383.
Elasticity in solids, on thermal dependence of (Brillouin), 251.

Fiftieth Birthday, Sir C. V. Raman's (B. S. M. and C. S. V.), 243.
Friedel-Crafts reaction, studies, Part IV (Desai and Ekhlas), 194.

$g(n)$, a remark on (Chowla), 237.

Harmonic functions, note (Thiruvenkatachar), 227.
Heterocyclic compounds, VII, VIII (Chowdhry and Desai), 1, 12.
Heterocyclic compounds, IX (Desai and Ekhlas), 567.

Integral equations, non-linear, on an infinite system (Minakshi Sundaram), 238.
Iso-nitroso-diphenyl-thio-barbituric acid and its higher homologues and analogues, organic and inorganic salts, colour in relation to chemical constitution (Dass and Dutt), 145.

Lattice sums, on an inequality concerning (Rao and Iyengar), 524.
Light scattering in anisotropic media (Hans Mueller), 267.
Light scattering in optical glasses, The anomalous depolarisation of (Krishnan), 442.

Magnetic anisotropy of biotite mica (Nilakantan), 39.
Micro-Dumas apparatus, a fine adjustment device for use with the (Rangaswami), 220.

Nuclear methylation of resacetophenone. Preparation of 3-methyl-resacetophenone and its derivatives (Rangaswami and Seshadri), 214.
Numbers, a theorem in the additive theory (Chowla), 160.

Phosphorus (P_4), the normal frequencies (Bhagavantam and Venkatarayudu), 119.
Photographischen Platte, Oertliche Empfindlichkeits-unterschiede in der Schichte (Paulsen und Reitz), 504.
Pleochroism of biotite mica (Nilakantan), 39.

Quasi-boolean algebras and many-valued logics (Vaidyanathaswamy), 165.

Raman bands of water in crystals, A chart (Nayar), 419.
Raman Effect and chemical constitution. Influence of constitutive and other factors on the double bonds in organic compounds (Murti and Seshadri), 519.
Raman Effect and multiple scattering of light (Kastler), 476.
Raman Effect, A statistical analysis of trends in research (Hibben), 294.
Raman Effekt, Studien zum, Mitteilung 89, Aethylenoxyd (Kohlrausch und Reitz), 255.
Raman Effekt, Studien zum, Mitteilung 90, Parasubstituiertes Acetophenon (Kahovec und Wagner), 323.
Raman Effekt, Studien zum, Mitteilung 91, Asymmetrisches Phthalyl-Chlorid (Kahovec), 330.
Raman Effekt, Studien zum, Mitteilung 92, Das Ramanspektrum des dimeren Ketens (Kohlrausch und Skrabal), 424.
Raman Effekt, Studien zum, Mitteilung 93, Cyclobutan-1, 2-dicarbonsaüre und Abkömmlinge (Kohlrausch und Sabathy), 436.
Raman Effekt, Studien zum, Mitteilung 94, Tetralsaüre und Ester (Ballaus), 483.
Raman Effekt, Studien zum, Mitteilung 95, Stickstoffkörper XII (Nitrogruppe) (Pendl, Reitzund Sabathy), 508.
Raman lines in organic crystals, low frequency (Venkateswaran), 448.
Raman spectra and molecular configurations of solid ethylene dihalides (Mizushima and Morino), 315.
Raman spectra in crystals; anhydrite and gypsum, interpretation of (Bhagavantam), 345.
Raman spectra of some organic bicyclic compounds; naphthalene, decaline, tetralin, indene, *trans*-β-decalone, *trans*-β-decalol (Saksena), 73.
Raman spectra of terpenes (Angus), 529.
Raman spectra of volatile fluorides. Applications of Raman spectra to chemical problems (Yost), 333.
Raman spectrum and specific heat of sulphur (Bhagavantam and Venkatarayudu), 115.

Reciprocity, some remarks on (Born), 309.
R. S. Krishnan's Reziprozitätsgesetz der Kolloid-Optik, Theoretische Bemerkungen (Vrkljan), 353.

Salicylic acid, derivatives, Part XIII (Hirwe and others), 208.
Scattering of light in a Rochelle salt crystal (Sibaiya), 393.
Scattering of light in sodium nitrate crystals, Part I (Nedungadi), 397.
Schallamplituden-Feldern mittels einer Methode der Isochromatin, untersuchung von, (Hiedemann und Osterhammel), 275.
Sequences, bounded, on linear transformations, II, III (Iyengar), 39, 135.
Special Number, Prefatory Note (B. S. M.), 249.
Spectres Raman et spectres d'absorption infra-rouge de compose's ou l'azote et tetracoordonné (Freymann et Freymann), 301.
Spettro Raman di alcuni Idrocarburi Paraffinici (Bonino e Ansidei), 405.
Sulphur molecule, the normal modes and frequencies (Bhagavantam and Venkatarayudu), 101.

Turbine Geometry, studies, II (Rao), 179.

Ultrasonic velocity in liquids, the dispersion of (Bär), 289.
Ultravioletter Lichtquanten, Über Biologische Wirkungen, (Jordan), 281.
Unmodified light scattering in liquids, depolarisation of (Saxena), 460.

Viscosity of air, coefficient (Majumdar and Vajifdar), 171.